

KOMATSU LIMITED

EXECUTIVE ORDER U-R-005-0465 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in California Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)	
2019	KKLXL06.7AAM	6.7	Diesel	8000	
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION		

Turbocharger, Charge Air Cooler, Exhaust Gas Recirculation, Electronic Direct Injection, Electronic Control Module, Selective Catalyst Reduction-Urea, Ammonia Oxidation Catalyst, Periodic Trap Oxidizer, Oxidation Catalyst	Loader, Dozer, Motor Grader
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The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION		EXHAUST (g/kw-hr)			OPACITY (%)				
POWER CLASS	STANDARD CATEGORY		NMHC	NOx	NMHC+NOx	со	PM	ACCEL	LUG	PEAK
130 ≤kW ≤ 560	Tier 4 Final	STD	0.19	0.40	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.001	0.14	diele	0.5	0.001			

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

_day of September 2018.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

Engine Model Summary Template

ATTACHMENT 1 OF 1

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Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
KKLXL06.7AAM	CPL4458:FR5C01	SAA6D107E-3-B	222@2200	107	79	697@1500	136	68	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, OC
KKLXL06.7AAM	CPL4458:FR94558	SAA6D107E-3-B	221@2100	111	78	694@1450	135	68	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, OC
KKLXL06.7AAM	CPL4458FR94557	SAA6D107E-3-B	213@2050	108	74	694@1500	135	67	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, OC
KKLXL06.7AAM	CPL4458:FR94583	SAA6D107E-3-B	189@2000	99	67	618@1500	121	61	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, OC
KKLXL06.7AAM	CPL4458:FR94584	SAA6D107E-3-B	192@2100	95	67	694@1450	133	65	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, OC
*KKLXL06.7AAM	CPL5454:FR96926	SAA6D107E-3-B	221@2100	111	78	694@1450	135	68	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, OC
*KKLXL06.7AAM	CPL5454:FR96925	SAA6D107E-3-B	213@2050	108	74	694@1500	135	67	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, OC
*KKLXL06.7AAM	CPL5454:FR96923	SAA6D107E-3-B	189@2000	99	67	618@1500	121	61	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, OC
*KKLXL06.7AAM	CPL5454:FR96924	SAA6D107E-3-B	192@2100	95	67	694@1450	133	65	EM,TC,CAC,EGR,DFI,ECM, SCR-U, AMOX, PTOX, OC

^{*}New Models Added